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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,821	01/07/2005	Akira Suzuki	Q85359	2860
23373 7590 06/28/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
			EXAMINER MAKI, STEVEN D	
			ART UNIT 1733	PAPER NUMBER
			MAIL DATE 06/28/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/520,821	<b>Applicant(s)</b> SUZUKI, AKIRA	
	<b>Examiner</b> Steven D. Maki	<b>Art Unit</b> 1733	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>010705,111405</u> . | 6) <input type="checkbox"/> Other: ____.  |

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- 1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2) Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites a step instead of an additional limitation of the tire. It is also unclear what is / was subjected to the specified temperature. In claim 8, it is suggested to change the wherein clause to --wherein the cushion rubber was vulcanized at a temperature of 100-130 °C--.

- 3) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 4) **Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeske et al (US 2002/0058760) in view of Chauvin et al (US 6,982,050).**

Jeske et al teaches a rubber composition for a tire comprising 100 parts rubber, 0.5-3.8 parts of a "thiuram type compound" having the formula 1 (paragraphs 14-17) and 0.5-3.0 parts acceleration accelerators such as mercaptobenzothiazole. The claimed component (1) reads on the "thiuram type compound" having formula (1) as set forth in paragraphs 14-17. The claimed component (2) reads on the mercaptobenzothiazole. Jeske et al teaches that the rubber composition releases no

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nitrosamines during vulcanization which are carcinogenic to humans. Jeske et al does not recite component (3).

As to claims 1 and 12, it would have been obvious to include component (3) such as diphenylguanidine in Jeske et al's rubber composition for a tire such that the rubber composition includes 0.1-4.0 parts compound (1), 0.1-2.0 parts compound (2) and 0.1-2.0 parts compound (3) since:

(A) Jeske et al, directed to *preventing release of nitrosamines during vulcanization of a rubber composition for a tire*, teaches rubber composition for a tire comprising 100 parts rubber, 0.5-3.8 parts of a **"thiuram type compound"** having the **formula 1 as in paragraphs 14-17** and 0.5-3.0 parts **acceleration accelerators such as mercaptobenzthiazole** and

(B) Chauvin et al, directed to *rubber compositions for tires which is free of carcinogenic nitrosamine precursor*, suggests providing such a rubber composition with 0.2-3 parts **"thiuram type compound"** (e.g. **tetrabenzylthiuram disulfide (TBZTD)**, **tetramethylthiuram disulfide (TMTD)**) and 0.1-3 parts **compound (2) such as mercaptobenzothiazole (MBT), benzothiazyl disulfide (DPG)** and 0.05-1 parts **compound (3) such as diphenylguanidine (DPG)**.

Advantageously, Chauvin et al teaches that a rubber composition containing the three compounds can be vulcanized at 95-140 °C.

As to claim 2, see paragraphs 14-17 of Jeske et al.

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As to claim 3, Jeske et al teaches uses the composition for a tire component such as belt strips (reinforced rubber plies comprising rubber and reinforcing material) of the tire.

As to claim 4, Jeske et al and Chauvin et al teach using natural rubber.

As to claim 5, Jeske et al and Chauvin et al teach using mercaptobenzothiazole

As to claims 3 and 7-10, it would have been obvious to use the composition suggested by the combination of Jeske et al and Chauvin et al as the **cushion rubber** for a retreaded tire since Chauvin et al teaches using the rubber composition comprising the tire components as a rubber layer ("cushion rubber") for bonding a precured tread to a carcass of a worn vulcanized tire.

As to claims 6 and 11, it would have been obvious to provide the rubber composition suggested by Jeske et al and Chauvin et al such that the claimed vulcanization time and tensile stress property are satisfied in view of Chauvin et al's teaching to use the composition (e.g. example 1.1) to obtain rapid curing and Chauvin et al's teaching to use the rubber composition comprising the tire components as a rubber layer ("cushion rubber") for bonding a precured tread to a carcass of a worn vulcanized tire.

#### Remarks

- 5) The remaining references are of interest.
- 6) No claim is allowed.


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7) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steven D. Maki  
June 23, 2007

  
**STEVEN D. MAKI** 6-23-07  
**PRIMARY EXAMINER**